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FEDERALLY FUNDED
R&D CENTERS

Observations on DOD
Actions To Improve
Management

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Mr. Chairman and Members of the Committee:

I am pleased to be able to provide this statement for the record on the results of our work on the Department of Defense's (DOD) federally funded research and development centers (FFRDC). In recent years, we, as well as the DOD Inspector General, Defense Contract Audit Agency (DCAA), Congressional Research Service, and Defense Science Board (DSB), have reported on issues related to DOD's management and use of its FFRDCs. Appendix I lists these reports.

To address the issues discussed in these reports, DOD established an internal advisory group to review and make recommendations for improving DOD's management of its FFRDCs. Its work resulted in an action plan, which was provided to the Congress in May 1995. In February 1996, DOD provided an update on the status of its action plan. My statement focuses on four key issues presented in the plan and discussed in the status update. These issues are (1) developing guidelines to ensure that management fees provided to FFRDCs are based on need and detailed justification, (2) defining core work appropriate for FFRDCs, (3) establishing criteria for the acceptance of work outside the core by the FFRDCs' parent corporations, and (4) establishing an independent advisory committee to review DOD's management, use, and oversight of its FFRDCs.

We generally support the direction provided in the action plan and believe it addresses some of the long-standing issues that have faced DOD and its FFRDCs. We also support the potential value of establishing strategic relationships between DOD and its contractors, a key factor that DOD attaches to its association with FFRDCs. The only concern on our part is that some of the proposed actions are still in draft form or early implementation, and we have yet to see how well they will address long-standing concerns and how effectively they will be implemented.

Background

FFRDCs were first established during World War II to meet specialized or unique research and development needs that could not be readily satisfied by government personnel or private contractors. Additional and expanded requirements for specialized services led to increases not only in the size of the FFRDCs but also the number of FFRDCs, which peaked at 74 in 1969. Today, 8 agencies, including DOD, fund 39 FFRDCs that are operated by universities, nonprofit organizations, or private firms under long-term contracts. Federal policy allows agencies to award these contracts noncompetitively. The Office of Federal Procurement Policy within the

Office of Management and Budget (OMB) establishes governmentwide policy on the use and management of FFRDCs.

Within DOD, the Director of Defense Research and Engineering is responsible for developing overall policy for DOD's 11 FFRDCs. The Director communicates DOD policy and detailed implementing guidance to FFRDC sponsors through a periodically updated management plan, and determines the funding level for each FFRDC based on the overall congressional ceiling on FFRDC funding and FFRDC requirements. Total funding for DOD's FFRDCs was \$1.25 billion in fiscal year 1995. DOD categorizes each of its FFRDCs as a systems engineering and integration center, a studies and analyses center, or a research and development laboratory. Appendix II provides information on each FFRDC, including its parent organization, primary sponsor, DOD funding, and staffing levels for fiscal year 1995.

The military services and defense agencies sponsor individual FFRDCs and award and administer the 5-year contracts, typically negotiated noncompetitively, after reviewing the continued need for the FFRDC. Unlike a private contractor, an FFRDC accepts restrictions on its ability to manufacture products and compete for other government or commercial business. These restrictions are intended to (1) limit the potential for conflicts of interest when FFRDC staff have access to sensitive government or contractor data and (2) allow the center to form a special or strategic relationship with its DOD sponsor.

Developing Guidelines on Management Fees

Management fees are discretionary funds provided to FFRDCs in addition to reimbursement for incurred costs, and these fees are similar to profits private contractors earn. Two issues that have remained unresolved for many years are what should management fee be provided for and how should FFRDCs use this fee. As far back as 1969, we concluded that nonprofit organizations such as FFRDCs incur some necessary costs that may not be reimbursed under the procurement regulations, and we recommended that the Bureau of the Budget (now known as OMB), develop guidance that specified the costs contracting officers should provide fees to cover.¹ In 1993, the Office of Federal Procurement Policy agreed that governmentwide guidance on management fees for nonprofit organizations was needed, but it has not yet issued detailed guidance.

¹Need for Improved Guidelines In Contracting for Research With Government-Sponsored Nonprofit Contractors (B-146810, Feb. 1969).

In the absence of such governmentwide guidance, recurring questions continue to be raised about how FFRDCs use their fees. In its 1994 report, for example, the DOD Inspector General concluded that FFRDCs used \$43 million of the \$46.9 million in fiscal year 1992 DOD fees for items that should not have been funded from fees. The bulk of this \$43 million funded independent research projects that should have been charged to overhead, according to the report. The remainder funded otherwise unallowable costs and future requirements, which the report concluded were not necessary for FFRDC operations. Similarly, as we recently reported, DCAA reviewed fiscal year 1993 fee expenditures at the MITRE Corporation and concluded that just 11 percent of the expenditures reviewed were ordinary and necessary to the operation of the FFRDC. DCAA reported that MITRE used fees to pay for items such as lavish entertainment, personal expenses for company officers, and generous employee benefits.² In our recent work at The Aerospace Corporation, we found that the corporation used about \$11.5 million of its \$15.5 million management fee for sponsored research.³ Aerospace used the remainder of its fee and other corporate resources for capital equipment purchases; real and leasehold property improvements; and other unreimbursed expenditures, such as contributions, personal use of company cars, conference meals, trustee expenses, and new business development expenses.

DOD's action plan recommended implementation of revised guidelines for management fee. Specifically, it recommended (1) moving allowable costs out of fee and reducing fee accordingly, and (2) establishing consistent policies on ordinary and necessary costs to be funded through fee. If effectively implemented, these actions should help to resolve many of the long-standing concerns over FFRDC use of management fee. Moving FFRDC-sponsored research out of fee would result in a substantial reduction of fee amount and should provide for more effective DOD oversight of FFRDC expenditures. This action would also subject all research to the Federal Acquisition Regulation cost principles applicable to cost-reimbursable items.

Defining ordinary and necessary expenses which may be covered by fee is a more challenging issue, which may explain why the issue has gone unresolved for so long. However, until DOD issues specific guidance

²Federally Funded R&D Centers: Use of Fee by the MITRE Corporation (GAO/NSIAD-96-26, Nov. 27, 1995).

³Federally Funded R&D Centers: Use of Contract Fee by The Aerospace Corporation (GAO/NSIAD-95-174, Sept. 28, 1995).

regarding ordinary and necessary expenses, debate will likely continue on whether fee can be used for such things as personal expenses for company officers, entertainment, and new business development. Although DOD's action plan identifies the need for clarifying guidance, our understanding is that such guidance has not been issued.

Defining Core Work

As a robust private-sector professional services industry grew to meet the demand for technical services, it became apparent that industry had the capability to perform some tasks assigned to FFRDCs. As early as 1962, the Bell Report noted criticism that nonprofit systems engineering contractors had undertaken work traditionally done by private firms.⁴ A 1971 DOD report stated, "It is pointless to say that the [systems engineering FFRDCs'] function could not be provided by another instrumentality...."⁵ According to this report, private contractors could also do the same type of work as the studies and analyses FFRDCs. The report pointed to the flexibility of using the centers and their broad experience with sponsors' problems as reasons for continuing their use. More recently, the DOD Inspector General concluded that FFRDC mission statements did not identify unique capabilities or expertise, resulting in FFRDCs being assigned work without adequate justification.⁶

In a 1988 report, we pointed out that governmentwide policy did not require that FFRDCs be limited to work that industry could not do; FFRDCs could also undertake tasks they could perform more effectively than industry.⁷ FFRDCs are effective, we observed, partly because of their special relationship with their sponsoring agency. This special relationship embodies elements of access and privilege as well as constraints to limit their activities to those DOD deems appropriate.

In 1995, the DSB and DOD's Action Plan elaborated on and refined the concept of the FFRDC special relationship. According to DOD, FFRDCs perform tasks that require a special or strategic relationship to exist

⁴Report to the President on Government Contracting for Research and Development, U.S. Senate, 87th Congress, 2nd Session, Document No. 94, May 17, 1962. This report, prepared by a presidentially appointed committee led by Bureau of the Budget Director David Bell, is commonly referred to as the "Bell Report."

⁵Report of the Special Study Group on Federal Contract Research Centers, Director of Defense Research and Engineering, Office of the Secretary of Defense, August 30, 1971.

⁶Contracting Practices for the Use and Operations of DOD-Sponsored Federally Funded Research and Development Centers, Office of the Inspector General, Department of Defense (95-048, Dec. 2, 1994).

⁷Competition: Issues on Establishing and Using Federally Funded Research and Development Centers (GAO/NSIAD-88-22, Mar. 7, 1988).

between the task sponsor and the organization performing the task. Table 1 shows DOD's description of the characteristics of this special relationship.

Table 1: Characteristics of the Relationship Between an FFRDC and Its DOD Sponsor

Characteristic	Description
Long-term continuity.	Uninterrupted, consistent support based on a continuing relationship.
Comprehensive knowledge of sponsor needs and operations.	Expertise on and institutional memory about issues of enduring concern to the sponsor.
Adaptability.	Ability to respond to emerging needs of their sponsors.
Objective, high-quality, current research.	A highly educated and skilled professional staff that can produce thorough, independent analyses to address complex technical and analytical problems and maintain currency in their fields of expertise.
Freedom from real or perceived conflicts of interest.	Independence from commercial, shareholder, political, and other associations and dedication to the public interest.
Broad access to sensitive government and commercial proprietary information.	Lack of institutional interests that could lead to misuse of information or cause contractor reluctance to provide such information.
Quick response capability.	Short-term assistance to help sponsors meet urgent and high-priority requirements.

According to the DSB, this special relationship allows an FFRDC to perform research, development, and analytical tasks that are integral to the mission and operation of the DOD sponsor.

The DSB and an internal DOD advisory group concluded that there is a continuing need for certain core work that requires the special relationship previously described.⁸ DOD concluded that giving such tasks to private contractors would raise numerous concerns, including questions about potential conflicts of interest. Accordingly, DOD has defined an FFRDC's core work as tasks that (1) are consistent with the FFRDC's purpose, mission, capabilities, and core competencies and (2) require the FFRDC's special relationship with its sponsor. The DOD advisory group estimated that this core work represented about 6 percent of DOD's research, development, and analytic effort. The DSB and the DOD advisory group also concluded that FFRDCs performed some noncore work that did not require a special relationship, and they concluded that this work should be transitioned out of the FFRDCs and acquired competitively. On the basis of these conclusions, DOD directed each sponsor to review its FFRDC's core

⁸Report of the DOD Internal Advisory Group on Federally Funded Research and Development Centers (May 18, 1995).

competencies, identify and prioritize the FFRDC's core work, and identify the noncore work that should be transitioned out of the FFRDC.

The core competencies the DOD sponsors identified appear to differ little from the scope of work descriptions that were in place previously. In several cases, sponsors seem to have simply restated the functions listed in an FFRDC's scope of work description. In other cases, the core competencies summarized the scope of work functions into more generic categories.

In February 1996, the Under Secretary for Defense (Acquisition and Technology) reported that DOD sponsors had identified \$43 million, or about 4 percent of FFRDC funding, in noncore work being performed at the FFRDCs. According to the Under Secretary, ongoing noncore work is currently being transferred out of the FFRDCs.

Even though DOD states that it is important to ensure that tasks assigned to the FFRDC meet the core work criteria, we believe it will continue to be difficult to determine whether a task meets these criteria. FFRDC mission statements remain broad, and core competencies appear to differ little from the previous scope of work descriptions. As we stated in our 1988 report, the special relationship is the key to determining whether work is appropriate for an FFRDC. However, determining whether one or more of the characteristics of the special relationship is required for a task may be difficult, since the need for an element of the special relationship is normally relative rather than absolute. For example, we believe DOD would expect objectivity in any research effort, but it may be difficult to demonstrate that a particular task requires the special degree of objectivity an FFRDC is believed to provide.

Uncertainty about whether an FFRDC's special relationship allows it to perform a task more effectively than other organizations also accompanies decisions to assign work to an FFRDC. In our 1988 report, we stated that full and open competition between all relevant organizations (FFRDCs and non-FFRDCs) could provide DOD assurance that it has selected the most effective source for the work. However, exposing FFRDCs to marketplace competition would fundamentally alter the character of the special relationship.

While DOD has initiated a department-wide effort to define more clearly the work its FFRDCs will perform, the criteria DOD has developed remains somewhat general. Applying this criteria requires the making of

judgements about the relative effectiveness of various sources for work in the absence of full information on capabilities which open competition would provide. It is doubtful that DOD's criteria will be satisfactory to those critics who are seeking a simple and unambiguous definition of work appropriate for FFRDCs.

Accepting Non-FFRDC Work

The question of whether accepting work from organizations other than its sponsor impairs an FFRDC's ability to provide objective advice has long been discussed. As early as 1962, the Bell Report raised this question but noted that no clear consensus had developed as to whether concerns about diversification were well founded. The report recognized that studies and analyses FFRDCs could effectively serve multiple clients but concluded that systems engineering organizations were primarily of value when they served a single client. During the early 1970s, DOD encouraged its FFRDCs to diversify into nonsponsor work. According to a 1976 DOD report, FFRDCs that did not diversify suffered efficiency and morale problems as their organizations shrank in the face of declining DOD research and development budgets.⁹ Nonetheless, this report recommended that the systems engineering FFRDCs limit themselves to DOD work and adjust their work forces in line with changes in the DOD budget. Regarding the MITRE Corporation, the report recommended that MITRE create a separate affiliate organization to carry out its nonDOD work. In 1994, Congress raised the issue that non-FFRDC affiliate organizations resulted in "...an ambiguous legal, regulatory, organizational, and financial situation," and directed that DOD prepare a report on non-FFRDC activities.¹⁰ More recently, however, the DSB concluded that FFRDCs and their parent companies should be allowed to accept work outside the core domain only when doing so was in the best interests of the country; the DSB did not propose criteria for determining when accepting nonsponsor work was in the country's best interests.

Acceptance of nonsponsor work is now common at DOD's FFRDCs. Except for the Institute for Defense Analyses, each parent organization performs some non-DOD work either within the FFRDC or through an affiliate organization created to pursue non-FFRDC work. Currently, six of the eight parent organizations that operate FFRDCs also operate one or more non-FFRDC affiliates. Some of these affiliates are quite small: the Center for Naval Analyses Corporation's Institute for Public Research accounts for

⁹Management of the DOD Federal Contract Research Centers, Director of Defense Research and Engineering, Office of the Secretary of Defense, June 1976.

¹⁰National Defense Authorization Act for Fiscal Year 1995, Senate Report 103-282.

about 3 percent of the center's total effort. Other affiliates are more significant: the MITRE Corporation's two non-FFRDC affiliates accounted for about 11 percent of MITRE's total effort, and the RAND Corporation's 5 non-FFRDC divisions account for about 32 percent of its total effort. The Massachusetts Institute of Technology and Carnegie-Mellon University—parent organizations of the MIT Lincoln Laboratory and the Software Engineering Institute, respectively—each pursue a diverse range of non-FFRDC activities.

DOD has recently become more active in seeking to oversee work its FFRDCs perform through non-FFRDC divisions. DOD sponsors have historically had the opportunity to oversee nonsponsor work performed within the FFRDC because the work is carried out under the FFRDC contracts that sponsors administer. This contract oversight mechanism is not available for non-FFRDC divisions. During 1995, for example, the Air Force expressed great reluctance to support The Aerospace Corporation's proposal to establish a non-FFRDC affiliate, indicating that the Air Force was concerned that it could not avoid the perception of a conflict of interest. Similarly, the MITRE Corporation sought permission to create a separate corporate division to perform non-FFRDC work. Recognizing that this arrangement could create a potential for conflicts of interest, DOD required MITRE to spin off a separate corporation to carry out its non-FFRDC activities. DOD required this new corporation to have a separate board of trustees and its own corporate officers. Further, DOD required that no work be subcontracted between the two entities to preclude the sharing of employees involved in DOD work—and knowledge developed in the course of DOD work—with the new corporation.

DOD's recent update of its action plan stated that a new policy requires the use of stringent criteria for the acceptance of work outside the core by the FFRDC's parent corporation. According to DOD, this new policy will ensure focus on FFRDC operations by the parent and eliminate concerns regarding "unfair advantage" in acquiring of such work. Currently, DOD plans to revise its FFRDC management plan, which would provide for greater oversight of non-FFRDC affiliates at all centers. These changes would require FFRDCs to agree to conduct non-FFRDC activities only if the activities are (1) subject to sponsor review and approval, (2) in the national interest, and (3) do not give rise to real or potential conflicts of interest.

Establishing an Independent Advisory Committee

Even though it endorsed the need for organizations such as FFRDCS, a DSB study recently concluded that the public mistrusted DOD's use and oversight of FFRDCS. A principal concern, according to the study, is that DOD assigns work to FFRDCS that can be performed as effectively by private industry and acquired using competitive procurement procedures. Further, DSB found that the lack of opportunities for public review and comment on DOD's process for managing and assigning work to FFRDCS—available in the competitive contracting process—invites mistrust. To address public skepticism about DOD's use and management of FFRDCS, DSB recommended the creation of an independent advisory committee of highly respected personnel from outside DOD. The committee would review the continuing need for FFRDCS, FFRDC missions, and DOD's management and oversight mechanisms for FFRDCS. DOD's action plan also recommended the establishment of an independent advisory committee to review and advise on FFRDC management.

In late 1995, an independent advisory committee was established. The six committee members, who are either DSB members or consultants, represent both industry and government. The committee is responsible for reviewing and advising DOD on the management of its FFRDCS by

- providing guidelines on the appropriate scope of work, customers, organizational structure, and size of the FFRDCS;
- overseeing compliance with DOD's FFRDC Management Plan;
- reviewing sponsor's management of FFRDCS;
- reviewing the level and appropriateness of non-DOD and nonsponsor work performed by the FFRDCS;
- overseeing the comprehensive review process; and
- performing selected FFRDC program reviews.

In January 1996, the advisory committee began a series of panel discussions at several FFRDCS, which were attended by DOD sponsor personnel and FFRDC officials. Representatives of our office attended the initial fact finding meetings and observed that the panel members appear to approach their task with the utmost seriousness and challenged the conventional wisdom by asking tough questions of both DOD and FFRDC officials. The advisory group plans to produce its first report in March 1996.

Mr. Chairman, this completes my statement for the record.

Related FFRDC Products

Defense Research and Development: Fiscal Year 1993 Trustee and Advisor Costs at Federally Funded Centers (GAO/NSIAD-96-27, Dec. 26, 1995).

Federal Research: Information on Fees for Selected Federally Funded Research and Development Centers (GAO/RCED-96-31FS, Dec. 8, 1995).

Federally Funded R&D Centers: Use of Fee by the MITRE Corporation (GAO/NSIAD-96-26, Nov. 27, 1995).

Federally Funded R&D Centers: Use of Contract Fee by The Aerospace Corporation (GAO/NSIAD-95-174, Sept. 28, 1995).

Defense Research and Development: Affiliations of Fiscal Year 1993 Trustees for Federally Funded Centers (GAO/NSIAD-95-135, July 26, 1995).

Department of Defense Federally Funded Research and Development Centers, Office of Technology Assessment (OTA-BP-ISS-157, June 1995).

Compensation to Presidents, Senior Executives, and Technical Staff at Federally Funded Research and Development Centers, DOD Office of the Inspector General (95-182, May 1, 1995).

Comprehensive Review of the Department of Defense's Fee-Granting Process for Federally Funded Research and Development Centers, Director for Defense Research and Engineering, May 1, 1995.

The Role of Federally Funded Research and Development Centers in the Mission of the Department of Defense, Defense Science Board Task Force, April 25, 1995.

Addendum to Final Audit Report on Contracting Practices for the Use and Operations of DOD-Sponsored Federally Funded Research and Development Centers, DOD Office of the Inspector General (95-048A, Apr. 19, 1995).

DOD's Federally Funded Research and Development Centers, Congressional Research Service (95-489 SPR, Apr. 13, 1995).

Report on Department of Defense Federally Funded Research and Development Centers and Affiliated Organizations, Director for Defense Research and Engineering, April 3, 1995.

Federally Funded R&D Centers: Executive Compensation at The Aerospace Corporation, (GAO/NSIAD-95-75, Feb. 7, 1995). Contracting Practices for the Use and Operations of DOD-Sponsored Federally Funded Research and Development Centers, DOD Office of the Inspector General (95-048, Dec. 2, 1994).

Sole Source Justifications for DOD-Sponsored Federally Funded Research and Development Centers, DOD Office of the Inspector General (94-012, Nov. 4, 1993).

DOD's Federally Funded Research and Development Centers, Congressional Research Service (93-549 SPR, June 3, 1993).

Inadequate Federal Oversight of Federally Funded Research and Development Centers, Subcommittee on Oversight of Government Operations, Senate Governmental Affairs Committee (102-98, July 1992). DOD's Federally Funded Research and Development Centers, Congressional Research Service (91-378 SPR, Apr. 29, 1991).

Competition: Issues on Establishing and Using Federally Funded Research and Development Centers (GAO/NSIAD-88-22, Mar. 7, 1988).

Information on DOD's Federally Funded Research and Development Centers

Fiscal year 1995 dollars in millions

FFRDC	Parent organization	Primary sponsor	Obligations	MTS
Systems engineering and integration centers				
Aerospace	The Aerospace Corp.	Air Force	\$335	1,910
MITRE C ³ I	MITRE Corporation	Assistant Secretary of Defense (C ³ I)	374	2,109
Subtotal				
Studies and analyses centers				
Arroyo Center	RAND Corporation	Army	20	99
Project Air Force	RAND Corporation	Air Force	24	112
National Defense Research Institute	RAND Corporation	OSD	19	105
Center for Naval Analyses	The CNA Corporation	Navy	47	238
IDA-Studies and Analyses/Operational Test and Eval. Ctr.	IDA	OSD	68	377
Logistics Management Institute	Logistics Management Institute	OSD	29	166
Subtotal				
Research and development laboratories				
Lincoln Laboratory	Massachusetts Institute of Technology	Air Force	275	1,018
Software Engineering Institute	Carnegie-Mellon University	Advanced Research Projects Agency	29	170
IDA-Communications and Computing	IDA	National Security Agency	33	142
Subtotal				
Total				

Note: command, control, communication, and intelligence (C³I); Office of the Secretary of Defense (OSD); and Institute for Defense Analyses (IDA).

Source: OSD.